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Intergenerational Cycles of Maltreatment: A Scoping Review of Psychosocial Risk and Protective Factors

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Abstract

Child maltreatment tends to show intergenerational continuity. However, a significant proportion of maltreated parents break these cycles. Since several studies have investigated risk and protective factors associated with the intergenerational continuity of child maltreatment over the past decades, and no systematic review of the literature is available, this scoping review aimed to summarize studies documenting associated psychosocial risk and protective factors. A secondary objective was to document the prevalence of this phenomenon. A search in six major databases (PsycINFO, Scopus, Medline, Social Work Abstracts, ProQuest Dissertations/Theses, Web of Science) was conducted. Studies involving human participants, presenting original findings, written in French or English, and of any type of design were included. There was no limit regarding the date of publication, except for theses/dissertations (5 years). A final sample of 51 papers was retained, 33 providing data on risk and protective factors; 18 providing only prevalence data. Results indicate that parents' individual characteristics (e.g., mental health, age), childhood adversity (e.g., multiple forms of adversity), relational (e.g., couples' adjustment, attachment, social support), and contextual factors (e.g., disadvantage, community violence) are relevant to the intergenerational continuity of child maltreatment. Prevalence rates of continuity ranged from 7 to 88%. Major limitations of reviewed studies are discussed. Continued efforts to uncover the mechanisms associated with the intergenerational continuity of child maltreatment using strong methodological designs are necessary. Knowledge in this area could lead to the development of effective prevention strategies (e.g., mental health services for parents, family/dyadic interventions) to break harmful intergenerational cycles of violence.

Keywords: intergenerational continuity, child maltreatment, risk factors, protective factors, prevalence

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Intergenerational Cycles of Maltreatment: A Scoping Review of Psychosocial Risk and Protective Factors

Child maltreatment is a significant societal problem with an estimated one million children maltreated per year in the United States (Sedlak et al., 2010). Worldwide, prevalence rates of child maltreatment range from 12.7% to 26.7%, varying by maltreatment type (Stoltenborgh, Bakermans-Kranenburg, Alink, & van IJzendoorn, 2012; Stoltenborgh, Bakermans-Kranenburg, & van IJzendoorn, 2013; Stoltenborgh, van IJzendoorn, Euser, & Bakermans-Kranenburg, 2011). Based on the Canadian Incidence Study (Public Health Agency of Canada, 2010) child maltreatment incidence rates across Canada have been reported as 21.47% in 1998, 38.33% in 2003 and 39.16% in 2008. According to data obtained from the 2014 General Social Survey on Victimization, 33% of Canadians aged 15 or older experienced maltreatment before the age of 15, however this estimate does not include emotional abuse and neglect (Burczycka, 2017).

The estimated economic lifetime burden of maltreatment is 124 billion dollars (Fang, Brown, Florence, & Mercy, 2012). More specifically, maltreatment is associated with increased costs to the physical and mental health care systems compared to the costs for children with no history of maltreatment (Florence, Brown, Fang, & Thompson, 2013). Abuse and neglect during childhood is detrimental to normal developmental processes (Cicchetti & Olsen, 1990). Indeed, maltreatment is associated with a myriad of negative outcomes, including internalizing problems (Maniglio, 2013), externalizing behaviours (Moylan et al., 2010), insecure attachment (Pickreign Stronach et al., 2011), substance use, depression (Herrenkohl, Hong, Klika, Herrenkohl, & Russo, 2013), suicidal ideation and attempt, as well as decreased self-esteem and life satisfaction (Fergusson, McLeod, & Horwood, 2013). In adulthood, individuals with a history of child maltreatment are also more likely to experience or perpetrate intimate partner violence (Adams,

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Handley, Manly, Cicchetti, & Toth, 2019; Widom, Czaja, & Dutton, 2014) and to abuse or neglect their own children (e.g. Berlin, Appleyard, & Dodge, 2011), thus continuing the cycle of abuse across generations.

An area of research that has been understudied and has important practical implications is the intergenerational transmission or continuity (IT/C) of child maltreatment. Intergenerational continuity of abuse has been defined as situations where an abused parent has an abused child regardless of who the perpetrator is, whereas intergenerational transmission has been defined as parents who experienced childhood abuse and then perpetrate abuse toward their own child (Berlin et al., 2011). The terms continuity and transmission are often used interchangeably in the literature, however, this is an important distinction to make, since prevalence rates as well as implicated risk and protective factors may differ. It is worth noting that most studies focus on intergenerational transmission of child maltreatment and that there has been a lack of investigation and differentiation of continuity and transmission of maltreatment, partly because not all studies include perpetrator type.

In a recent meta-analysis of 142 studies, Madigan et al. (2019) provided support for the intergenerational transmission hypothesis with modest effect sizes for neglect, physical abuse, emotional abuse, and sexual abuse. However, regardless of perpetrator identity and maltreatment type, children of parents who have experienced maltreatment are at an increased risk of being maltreated (e.g. Baril & Tourigny, 2016; Valentino, Nuttall, Comas, Borkowski, & Akai, 2012). The prevalence rates of IT/C vary widely across studies. Several factors could account for these differences including sample characteristics, included maltreatment types and their definitions, age range of the children, etc. Rates of IT/C show that a significant proportion of maltreated parents break these intergenerational cycles (e.g. Sidebotham et al., 2006; Widom & Wilson, 2015). Thus, understanding the underlying mechanisms of IT/C or the risk and protective factors

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involved is of utmost importance for the development of prevention initiatives. While some studies have documented these mechanisms over the past decades, no systematic review of the scientific literature has been done to integrate these findings and propose future areas of inquiry. This is particularly problematic since these studies were published in a variety of journals targeting different audiences and disciplines.

This study seeks to address this knowledge gap by systematically reviewing the scientific literature on psychosocial factors that may confer a risk or protective effect in breaking or perpetuating cycles of child maltreatment. A secondary objective is to extract prevalence data. Identifying and better understanding the mechanisms that are involved in the IT/C of child maltreatment will not only contribute to knowledge on this issue and guide future research directions, but will also inform practice to allow for better precision in intervention and prevention programs.

Methodology

After reviewing the research questions (i.e. What are the factors that increase or decrease the risk of IT/C of child maltreatment? What is the prevalence of IT/C of child maltreatment?) and noting that they were both broad and qualitative in nature, it was determined that a scoping review would be most appropriate. The scoping review was guided by the work of Arksey and O'Malley (2005). The team used EndNote and Rayyan (Ouzzani, Hammady, Fedorowicz & Elmagarmid, 2016), the latter of which is a free web-based tool for screening and selecting articles for systematic reviews.

Article Search and Selection

The project team consisted of two subject experts and one subject librarian. The librarian advised on database selection and, in collaboration with the subject experts, created the database search strategies. The initial search was built in PsycINFO (Ovid, 1806 to Present). It was peer

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reviewed by Dr. Marinus Van IJzendoorn, Department of Psychology, Education, and Child Studies at Erasmus University Rotterdam. After amending the protocol and PsycINFO search based on the peer review recommendations, the search strategy was then adapted to the following databases: MEDLINE (Ovid, 1946 to Present); Social Work Abstracts (Ovid, 1968 to Present); Scopus; Web of Science Core Collection (limited to Conference Proceedings Citation Index- Science (CPCI-S) --1990-present and Conference Proceedings Citation Index- Social Science & Humanities (CPCI-SSH) --1990-present); and ProQuest Dissertations and Theses Global. The database searches were all run on November 9, 2018. The search combined terms related to abuse and maltreatment (such as child abuse, domestic violence, and emotional abuse) with terms related to intergenerational relations (such as family relations, home environment, and childrearing practices) and lastly with risk factors, protective factors, and/or resilience. See Appendix A for the PsycINFO search strategy.

Inclusion and Exclusion Criteria

The types of maltreatment under investigation included psychological, physical, and sexual abuse, neglect, or exposure to intimate partner violence. Studies were included if the authors analyzed at least one psychosocial risk or protective factor in the context of the IT/C of child maltreatment, and/or documented the prevalence of IT/C. Studies on genetic or epigenetic factors were not included, given that they have fewer practical implications. The main inclusion criterion was that intergenerational maltreatment was documented within the sample. Published studies, dissertations/theses, and conference proceedings involving human participants were included, while other review papers and book chapters were excluded if they did not include original research findings. Articles published in English and French were reviewed, and both quantitative and qualitative studies were included. No specific inclusion or exclusion criteria pertaining to the design, demographic background of the participants, country where the study

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was conducted, or the year of publication were included, except for theses/dissertations, which were searched for within the past five years.

The initial search yielded 3770 results. After deduplication, 3003 articles remained. Based on inclusion and exclusion criteria, an initial screening of records using Rayyan excluded 2911 records. Following a full-text assessment of the remaining 92 articles, an additional 41 records were removed. Sixteen articles were identified through hand searching, leaving the authors with a final sample of 51 articles. See Figure 1 for a PRIMSA Flow Diagram.

Data Extraction and Analysis

During the article screening process, four inter-rater reliability sessions occurred and discrepancies were resolved through discussion. The first session of inter-rater reliability was performed for the titles and abstracts screening phase. For the first 20 articles, the inter-rater agreement was 60% (12 out of 20). After discussing discrepancies, a consensus was reached. Another 10 articles were screened by both raters and agreement reached 100%. The remaining articles were screened by the second author, who consulted with the first author regarding uncertainties. The second phase of inter-rater reliability occurred when the final references were imported into Rayyan, and both raters read eight full-text articles. Based on the first round of rating, there was 75% agreement. An additional eight full-text articles were read with 100% agreement. After the reliability sessions, each rater continued to read full-text articles to determine eligibility. Thirty-eight articles remained in Rayyan after reading the full text articles, reasons for exclusion were: not reporting on the second generation ($n = 23$); lack of prevalence data or analysis leading to the identification of risk or protective factors ($n = 9$); lack of fit with maltreatment definition ($n = 5$; e.g. child abuse potential); not reporting original findings ($n = 4$). At the stage of appraising the final 51 full-text articles, both raters appraised and discussed each article. The articles were appraised using the AXIS critical appraisal tool developed by Downes,

Brennan, Williams, and Dean (2016) through a rigorous process using a Delphi panel. Data were extracted from each full-text article: study aims, sample/setting, measures, principal relevant findings, limitations.

Results

Risk and Protective Factors Associated with the IT/C of Child Maltreatment

Table 1 presents the aims, setting, design, sample characteristics, maltreatment measures, and a summary of the results for the studies that documented risk and/or protective factors (n = 33). Factors documented were categorized as such: parents’ individual characteristics, parents’ histories of childhood adversity, relational factors, and contextual factors. These categories were inspired by Bronfenbrenner’s bioecological model (Bronfenbrenner, 1977). Table 2 offers a summary of the factors that were investigated, how many times they were investigated, and how often these investigations led to significant findings.

Parents’ individual characteristics. In their studies documenting factors associated with the intergenerational continuity of child sexual abuse, Baril and Tourigny (2016) and Leifer, Kilbane, and Kalick (2004) found that mothers’ posttraumatic stress symptoms increased the risk of continuity. Grunsfeld (2018) also identified maternal anxiety as a risk factor. Williams (2015) found an interaction between mothers’ childhood sexual abuse and anxiety in predicting later physical abuse or neglect toward their child. Egeland, Jacobvitz, and Sroufe (1988) and Frias-Armenta (2002) identified anxiety and depression as risk factors for the intergenerational transmission of maltreatment. Two studies (Yang, Font, Ketchum, & Kum, 2018; Plant, Barker, Waters, Pawlby, & Pariante, 2013) concur by showing the relevance of maternal depressive symptoms (post-birth and antenatally). Zuravin and Fontanella (1999), on the contrary, found that maternal depressive symptoms did not mediate the association between child sexual abuse and later use of severe violence or verbal abuse during conflicts.

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Apart from their results regarding anxiety, Williams (2015) did not find other lifetime psychiatric diagnoses to be relevant in the intergenerational transmission of child maltreatment. Pears and Capaldi (2001) also obtained non-significant results when looking at the role of parental psychopathology in the intergenerational transmission of maltreatment. However, Dixon et al. (2005a, 2005b, 2009) found that a history of mental illness, as well as substance use increased the risk of intergenerational transmission of maltreatment for mothers of newborns. Mixed findings were uncovered with regard to substance use as a potential risk factor. Linscott (2018) found that hard drug use in adolescence did increase the risk of perpetrating maltreatment in mothers with a history of child maltreatment, but alcohol use in young adulthood did not. Grunsfeld (2018) and McCloskey and Bailey's (2000) results indicate that maternal substance addiction or use was not a significant risk factor for the intergenerational continuity of sexual abuse, while Leifer et al.'s (2004) results show the opposite. Regarding the transmission of physical punishment, Frias-Armenta (2002) found that alcohol consumption was a significant risk factor.

Mothers' psychopathology is the most studied risk factor, but other characteristics were considered in individual studies. Mothers' aggressive response bias (Berlin et al., 2011), maternal prenatal authoritarian attitudes (Valentino et al., 2012), parental attitudes in favour of violence and perceived legitimacy of own maltreatment (Clément et al., 2012), and antisocial behaviors (Frias-Armenta, 2002) were found to be risk factors for the IT/C of maltreatment. Mixed results were found regarding maternal age. Bartlett and Easterbrooks (2015) did not find a significant effect with mothers for the intergenerational transmission of neglect, nor did Pears and Capaldi (2001) in their study on the transmission of maltreatment. On the other hand, Dixon et al. (2005a, 2005b, 2009) found that parenting under 21 years was associated with the intergenerational transmission of abuse. Linscott (2018) found that the older age of the mother at first birth was

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protective against the transmission of maltreatment. Other protective factors documented are mothers’ participation in therapy (Egeland et al., 1988), parents’ high self-control (Schofield et al., 2017), and marijuana use in early adulthood (Linscott, 2018).

In two studies, researchers examined children’s characteristics as potential risk factors. Younger children and unhealthy or difficult infants were at increased risk of IT/C of maltreatment (Clément et al., 2012; Korbin, 1986).

Parents’ childhood adversity. Baril and Tourigny (2016) found that the timing of mothers’ childhood sexual abuse had an impact on the intergenerational continuity of sexual abuse, such that the risk was higher when mothers were abused prior to 6 years old or in adolescence. According to Thornberry and Henry (2013), maltreatment during adolescence, as opposed to only in childhood, was a risk factor for IT/C. For the continuity of sexual abuse, insecure childhood attachment in the mothers and them living fewer years with their own mothers also increased the risk (Leifer et al., 2004).

Experiencing other adverse childhood experiences unrelated to maltreatment increased the risk of intergenerational continuity of child maltreatment in homeless families (Narayan et al., 2017). Bartlett and Easterbrook (2015) found that maternal history of multiple maltreatment predicted later infant neglect, while maternal history of neglect only did not. Thus, experiencing multiple forms of maltreatment increased the risk of intergenerational transmission of neglect. Similarly, witnessing interparental violence in childhood was associated with increased risk of intergenerational transmission of abuse (Heyman & Slep, 2002). However, a supportive relationship with an adult during the mothers’ childhood was found to protect against perpetuating cycles of abuse (Egeland et al., 1988). Finally, the author of the only qualitative study included in this review highlighted the fact that several participants in the sample of mothers incarcerated for maltreating their child(ren) causing death had unsuccessfully tried to

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draw attention to their distress in childhood (Korbin, 1986).

Relational factors. A number of studies showed that mothers' experiences of intimate partner violence victimization (recent history, in adulthood, lifetime history) (Baril & Tourigny, 2016; Barrett, 2010; Clément et al., 2012; Leifer et al., 2004; Jaffee et al., 2013; Korbin, 1986; Renner & Slack, 2006) or relational problems with their partner (Leifer et al., 2004) increased the risk of IT/C of child maltreatment. On the contrary, positive and supportive relationships between the parents or the mothers and their partner were found to reduce the risks of IT/C of child maltreatment in several studies (Conger, Schofield, Neppl, & Merrick, 2013; Egeland et al., 1988; Jaffee et al., 2013; Schofield et al., 2017; Thornberry et al., 2013). More generally speaking, social isolation and lack of support were identified as risk factors for the IT/C of maltreatment (Berlin et al., 2011; Korbin, 1986), and perceived social support was found to be protective (Tracy, Salo, & Appleton, 2018). However, one study did not find that safe, stable, and nurturing relationships influenced the transmission of harsh physical discipline (Herrenkohl, Klika et al., 2013). In addition, current attachment to and support from a parental figure was not found to reduce the risk of IT/C in Thornberry et al.'s study (2013). Finally, fathers' use of corporal punishment had an impact on mothers' use of corporal punishment, but the reverse was not true in a Chinese study (see table for details; Wang & Xing, 2014).

Several studies investigated variables related to the parent-child relationship as potential risk or protective factors for the IT/C of child maltreatment. Grunsfeld (2018) and Williams (2015) found no impact of inadequate parenting or parenting problems on the continuity of sexual abuse or the presence of other forms of abuse in the offspring of child sexual abuse survivors. Testa, Hoffman, and Livingston (2011), on the other hand, found that lower perceived monitoring and greater perceived approval of sex by mothers of female teenagers increased the risk of sexual abuse continuity, and that perceived mother's communication effectiveness was protective.

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Dixon et al. (2005b, 2009) found that poor parenting and parenting styles were risk factors for the intergenerational transmission of abuse. Valentino et al. (2012) found that low levels of authoritarian parenting were associated with continuity of maltreatment, but only among African American mothers. Parental stress was found to be a significant risk factor for the IT/C of physical abuse in Clément et al. (2012). Consistency of discipline was found to be unrelated to the intergenerational transmission of maltreatment (Pears & Capaldi, 2001). Maternal warmth, positive adult-child relationship, better attachment to the child, and higher satisfaction with parenthood appeared as protective factors (Jaffee et al., 2013; Thornberry et al., 2013).

Contextual factors. Children’s exposure to community violence appeared as a risk factor for the intergenerational continuity of maltreatment in a sample of teenage mothers (Valentino et al., 2012). Perpetuating cycles of abuse was positively associated with stressful life events, living with a violent adult or having a partner with a criminal arrest history, and financial stress (Dixon et al., 2005a; Egeland et al., 1988; Korbin, 1986; Linscott, 2018). On the contrary, having higher socioeconomic status appeared protective in one study (Jaffee et al., 2013).

Prevalence of the IT/C of Child Maltreatment

Of the 51 studies included in this review, 18 only provided us with prevalence data pertaining to the IT/C of child maltreatment. Some studies on mechanisms also provided prevalence data. The results are presented separately for studies looking at one type or several types of maltreatment in Table 3. Taken together, results suggest that prevalence rates for the IT/C of child maltreatment vary between 6.7 and 88%. Variations are explained by several factors: the age of the children when the study was conducted, the number of maltreatment types included, the substantiation status, the source of information on child maltreatment, the focus on intergenerational continuity vs transmission, the study design, and the methodological quality and sample characteristics.

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Methodological Quality of the Reviewed Studies

Studies included in this review varied greatly in terms of their methodological quality. Some studies obtained very low ratings using AXIS (i.e. Adshead, & Bluglass, 2005; Faller, 1989; Korbin, 1986; Rikić et al., 2017; Zuravin & Fontanella, 1999) while others obtained high ratings (i.e. Clément, & Bouchard, 2003; Clément et al., 2012; Putnam-Hornstein et al., 2015). The main limitations from the included studies in terms of design, sample, and measures are described here.

Design. An important proportion of studies had cross-sectional designs ($n = 19$), including one qualitative study), while only six studies out of 51 had prospective longitudinal designs, the stronger design to study IT/C of child maltreatment. Secondary analysis of data collected for other purposes than studying IT/C of child maltreatment was also relatively frequent, leading to suboptimal designs in relation to the research questions. One item of the AXIS grid assesses if “methods (including statistical methods) were sufficiently described to enable them to be repeated?” and 16 papers out of 51 received a “no”.

Sample. Out of 46 studies for which it would have been relevant to do so (e.g., excluding population or epidemiological studies), only two presented a justification for their sample size in the form of a power analysis. In addition, 23 studies were categorized as having their “sample frame taken from an appropriate population base so that it closely represented the target/reference population under investigation”, while 23 studies received a “no” to that item, and for five studies raters were unable to determine. Often, the selection process was also not appropriate to obtain a representative sample of the target population (e.g., convenience samples, recruiting only in one school or area). Indeed, 54.9% of studies received a negative rating for that AXIS item while 35% received a positive rating, and 9.8% were rated as “don’t know”. Finally, more than half of the studies did not provide sufficient information about non-responders, or for longitudinal

studies, about the responders who dropped-out between time points.

Measures. Regarding the measures, the most important limitation was the use of unpublished and/or unvalidated measures in an important number of studies. For two studies, raters did not have sufficient information to tell if the variables were measured in an appropriate way based on the aims of the study. Out of the 51 studies included in this review, 18 only used validated and/or published measures, 11 only used unvalidated measures, 19 used both types of measures, and raters were unable to tell in three cases.

Discussion

The primary objective of this review was to identify the psychosocial risk and protective factors involved in intergenerational cycles of child maltreatment, with the secondary objective of extracting prevalence data to better understand the extent of this problem. Through reviewing a total of 51 studies, identified risk and protective factors were categorized as parents’ individual characteristics, parents’ histories of childhood adversity, relational factors, and contextual factors. Parental psychopathology was the most documented risk factor with the majority of studies reporting an increased risk of IT/C of child maltreatment among affected parents, and other studies finding no effect (see Table 2). Mixed results were also identified concerning substance use and maternal age. In terms of parents’ childhood adversities, some sexual abuse characteristics, and experiencing multiple forms of maltreatment and other adversities were found to increase the risk of IT/C, while having had supportive relationships with adults was protective. The most documented relational risk factors were mothers’ histories of intimate partner violence and problems with their partner and all studies investigating these factors found significant effects. Surprisingly, parenting behaviors, while well studied, yielded mixed findings in terms of their significance. Positive relationships with other adults and with their own child, and high satisfaction with parenthood were relational protective factors, even though investigations of *safe*,

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3 *stable, and nurturing relationships* and social support in general resulted in mixed findings.

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5 Finally, some contextual risk and protective factors, while a lot less documented, were identified
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7 (e.g. community violence, living with a violent adult, socioeconomic status). Prevalence data of
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9 IT/C varied depending on maltreatment types and sample characteristics (6.7 to 88%).
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12 Adding to the findings presented in this review, several articles relevant to the IT/C of
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14 child maltreatment were published recently in a Special Edition of *Development and*
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16 *Psychopathology* (February 2019, vol. 31). Two of these studies had cross-sectional designs
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18 (Adams et al., 2019; St-Laurent, Dubois-Comtois, Milot, & Cantinotti, 2019) and the remaining
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20 four were longitudinal (Augustyn, Thornberry, & Henry, 2019; Choi et al., 2019; Capaldi,
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22 Tiberio, Pears, Kerr, & Owen, 2019). Intimate partner violence (Adams et al., 2019; Labella et
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24 al., 2019; St-Laurent et al., 2019), adolescent delinquency (Augustyn et al., 2019), maternal
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26 postpartum depression (Choi et al., 2019), and lack of family support (St-Laurent et al., 2019)
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28 were identified as risk factors for the IT/C of maltreatment. Future studies should further explore
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30 protective factors at multiple ecological levels beyond individual and relational and investigate
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32 resilience processes.
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37 38 **Strengths and Limitations**

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40 The main limitations of the reviewed studies were the use of cross-sectional designs,
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42 secondary analysis, and a lack of a thorough discussion of methods. In many studies, there was
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44 no justification for sample sizes, unrepresentative samples, and the use of unvalidated or
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46 unpublished measures. The majority of samples represented primarily low-income populations,
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48 thus factors related to the IT/C of child maltreatment in affluent families might still be
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50 misunderstood. Additionally, 23 studies were rated as having sample issues related to
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52 representativeness. Furthermore, there were overlapping samples in some studies (Dixon et al.,
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54 2005a, 2005b, 2009; Conger et al., 2013 and Schofield et al., 2017; Linscott, 2018 and Leve,
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56 2005a, 2005b, 2009; Conger et al., 2013 and Schofield et al., 2017; Linscott, 2018 and Leve,
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2015; Thornberry et al., 2013 and Thornberry & Henry, 2013). Out of the 33 studies that documented risk or protective factors, the majority were based on studies conducted in the United States (n = 23), the remaining were conducted in Canada (n = 2), China (n = 1), the United Kingdom (n = 6), and Mexico (n = 1). Hence, 31 out of the 33 studies were conducted in high income countries, which could call into question the generalizability of the reviewed findings to low-to-medium income countries. The same applies to studies documenting the prevalence of the IT/C of child maltreatment.

With regard to the present review, to our knowledge, this is the first systematic scoping review specifically documenting psychosocial risk and protective factors associated with the IT/C of child maltreatment. The results provide an important contribution to the literature, as current knowledge is scattered and methodological quality of past studies is extremely diverse. Furthermore, documented prevalence rates have varied widely. The results described in this review point to areas for future research, as many variables need more extensive study to clarify mixed findings. Psychosocial factors were selected as the topic for this review given their clinical relevance, however, genetic factors cannot be discounted, and reviewing the literature on these factors could be a worthy avenue for future investigations.

Implications for research, practice, and, policy are presented in Table 4. In terms of implications for practice, findings from this scoping review highlight the fact that a history of maltreatment in parents’ childhood is a significant risk factor for child maltreatment. Hence, practitioners working with maltreated parents, especially those who cumulate several adverse childhood experiences, need to stay alert and monitor the presence of additional risk factors that could increase further the risk of IT/C. Since parents’ mental health appears be one of these major factors, accessible and affordable prevention and intervention programs supporting parents’ mental health and recovery from substance use problems are essential. In addition, prevention

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and support initiatives targeting women with a history of child maltreatment who become mothers at a young age seems like an avenue worth pursuing in order to reduce the risks of IT/C of child maltreatment. Furthermore, mothers' difficulties in their intimate relationship, such as intimate partner violence victimization, seems like a major risk factor for the IT/C of child maltreatment, while several studies indicated a protective effect of positive and supportive intimate relationships. In that context, targeting the family system as a whole in order to foster positive relationships and reduce violence appears promising to prevent the occurrence of intergenerational cycles of maltreatment. Fostering maternal warmth, secure mother-child attachment, healthy parenting practices, and a positive outlook toward parenthood could also be important. Finally, while contextual factors are less documented, available data show that socioeconomic status and community violence are risk factors for the IT/C of child maltreatment. General social policies and public funding of community resources aiming to reduce parents' financial insecurity, encourage the pursuit of higher levels of education, and provide sufficient financial resources for families to live in safe neighborhoods are essential.

Conclusion

Child maltreatment is a significant problem worldwide and experiencing maltreatment is associated with the continuity of abuse into subsequent generations. The present study offered an overview of the documented risk and protective factors associated with the IT/C, as well as prevalence data available. Factors such as maternal mental health, relationship quality, and early adversities appear relevant to understanding intergenerational cycles of child maltreatment. Continued efforts to uncover the mechanisms associated with the intergenerational continuity of child maltreatment using strong methodological designs are necessary. Ultimately, a greater understanding of these mechanisms will inform communities, clinicians, and policymakers of the factors that could be targeted effectively in preventive and curative interventions aiming to

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eradicate violence from our children’s lives and to foster healthy developmental trajectories in vulnerable children and their families.

For Peer Review

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Table 1

Results Pertaining to Risk and Protective Factors Categorized by Continuity and Transmission

Reference	Study Aims	Study Setting and Design	Sample	Measurement of Maltreatment	Risk and Protective Factors
Intergenerational Continuity Studies					
Baril & Tourigny (2016)	Investigate maternal factors associated with the intergenerational cycle of CSA	Canada Cross-sectional survey	45 mothers and their children who both experienced CSA	Unvalidated measures	Risk factors: PTSD symptoms, physical spousal violence in the past year, and experiencing sexual assault before the age of 6 or during adolescence
Berlin, Appleyard, & Dodge (2011)	Examine associations between mothers' maltreatment and offspring maltreatment and investigate potential mediators (mothers' mental health, social isolation, and social information processing)	United States Prospective longitudinal	499 mothers and their infants	11 items adapted from the Parent-Child Conflict Tactics Scale County records of child maltreatment	Risk factors: Mothers' childhood physical abuse predicted aggressive response biases, and aggressive response biases predicted offspring victimization. Mothers' childhood neglect predicted social isolation, and social isolation predicted offspring victimization
Grunsfeld (2018)	Investigate maternal risk factors in the intergenerational transmission of child sexual abuse	United States Longitudinal design	891 mothers and children Children were 4, 8 and 12 years old when maltreatment was measured	-Child protective records -Child Sexual Behavior Inventory – - Unvalidated measures on sexual abuse (self and caregiver report)	Risk factors: Maternal mental health (anxiety). Maternal substance addiction and inadequate parenting were not significant predictors of child CSA
Leifer Kilbane, & Kalick 2004	Explore differences between sexually abused mothers of non-sexually abused children (discontinuity) and sexually abused mothers of sexually abused children (continuity)	United States Cross-sectional	96 children who were sexually abused and their mothers	-Semi-structured clinical interview -CPS records ¹	Risk factors: insecure childhood attachment, living fewer years with own mothers, negative outcomes in relationships with partners, abuse victimization in adulthood, substance use, trauma-related symptoms
McCloskey & Bailey (2000)	Investigate familial influences in the intergenerational	United States	179 women who had experienced spousal violence	-Sexual Experiences Survey	Risk factors: no significant interaction between maternal CSA

¹ Child Protective Services

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	transmission of child sexual abuse	Cross-sectional	Mean age of child: 9 years (between 6 and 12 years)	-Unvalidated measures	and drug use in predicting offspring CSA
Narayan et al. (2017)	Examine the intergenerational continuity of ACEs in mothers and young children living in homeless shelters	United States Cross-sectional	95 mother-child dyads Age of children: between 4 and 6 years	-ACE calculator -Parents' responses on the Lifetime Events, Child Version	Risk factors: family dysfunction ACEs
Testa, Hoffman, & Livingston (2011)	Investigating sexual victimization of mothers and their daughters, and the mediating role of parenting	United States Longitudinal	913 adolescent females and their mothers who completed baseline and T1 (first semester of college) assessments Average age of adolescents at baseline: 18.1 years	Sexual Experiences Survey – assessed unwanted sexual experiences since age 14	Risk factors: lower perceived monitoring and greater perceived approval of sex Protective factor: perceived mother's communication effectiveness
Valentino, Nuttall, Comas, Borkowski, & Akai (2012)	Examine the intergenerational continuity of maltreatment among a sample of adolescent mothers, and identify protective factors	United States Longitudinal design	46 adolescent mothers who experienced child abuse	Childhood Trauma Questionnaire at the 14-year assessment (completed by mothers) and completed by their children when they were 18 years old	Risk factors: maternal prenatal authoritarian attitudes, children's exposure to community violence. Low levels of authoritarian parenting associated with continuity only among African American mothers
Reference	Study Aims	Setting	Sample	Measurement of Maltreatment	Risk and Protective Factors
Intergenerational Transfer/Transmission Studies					
Barrett (2010)	Examine the impacts of CSA and intimate partner violence on parenting practices	United States Secondary analysis	50 mothers who experienced CSA and their children Children had to be 3 years or younger	-Unvalidated measures -Parent-Child Conflict Tactics Scale Revised	Risk factors: lifetime history of intimate partner violence, recent history of intimate partner violence, no mediation found for corporal punishment, parenting stress, and non-violent discipline
Bartlett & Easterbrooks (2015)	Investigate the effect of relationships and maternal age on intergenerational risk for neglect	United States Longitudinal	447 female adolescents with at least one child Mean age of infants at T2: 1.81 to 29.03 months	CPS reports (substantiated cases of abuse and neglect)	Risk factors: maternal childhood history of multiple maltreatment significantly predicted infant neglect while maternal childhood history of neglect only did not. No moderation effect of maternal age

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					among mothers with a history of neglect
Clément, Boudreau, & Chamberland (2012)	Investigate the intergenerational transmission of physical violence towards children	Canada Cross-sectional survey	456 mothers who experienced physical abuse during childhood Mean age of child: 8.82 years	-Unvalidated measures -Parent-Child Conflict Tactics Scale	Risk factors: young age of child, parental stress, parental attitudes in favour of violence, perceived legitimacy of violence experienced, domestic violence
Conger, Schofield, Neppl, & Merrick (2013)	Investigate the transmission of harsh parenting and evaluate the role of spouses/partners	United States Longitudinal	290 participants and their children Mean age of child at first assessment: 2.31 years	Observational measure of harsh parenting by parents and their adult children	Protective factors: warmth and positive communication by adult offspring's partner (communication between adult and partner)
Dixon et al. (2005a, b; 2009) ²	Examine intergenerational cycles of abuse among mothers and their newborn children to identify risk and protective factors	United Kingdom Longitudinal	Of 4,351 families, 135 were identified as either the mother or her partner experiencing physical and/or sexual abuse during their own childhood Age of children: four to six weeks (Dixon et al., 2005a); four to six weeks and three to five months (Dixon et al., 2005b; 2009)	Index of Need checklist	Risk factors: parenting under 21 years, a history of mental illness, living with a violent adult (Dixon et al., 2005a); same risk factors + substance use (Dixon et al., 2009); same risk factors + poor parenting, parenting styles (Dixon et al., 2005b)
Egeland, Jacobvitz & Sroufe (1988)	Identify factors that distinguish mothers who break the cycle of abuse	United States Prospective longitudinal	30 mothers (18 in abuse continuity group; 12 in abuse discontinuity group) Measurements administered from infant age of 7 days to 64 months	-Unvalidated interview -Observation of childrearing practices	Risk factors: stressful life events, anxiety and depression Protective factors: supportive relationship with an adult during mother's childhood, participation in therapy, positive, satisfying and stable relationship with partner, emotional support from partner

² Dixon studies using the same sample have been combined

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INTERGENERATIONAL CYCLES OF MALTREATMENT

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Frias-Armenta (2002)	Studying the long-term effects of physical punishment	Mexico Cross-sectional	75 women who had abused their child Mean age of child: 8.3 years	Conflict Tactics Scale	Risk factors: antisocial behaviour, alcohol consumption, depression and anxiety
Heyman & Slep (2002)	Identify the role of family violence experiences during childhood in the transmission of abuse	United States Cross-sectional	Fathers: n =1201 Mothers: n =1503	-Unvalidated measure on family violence -Conflict Tactics Scale	Risk factors: mothers' exposure to interparental violence
Herrenkohl et al. (2013)	Investigation of the intergenerational transmission of physical abuse and the role of safe, stable, and nurturing relationships	United States Prospective Longitudinal	357 parent-child dyads Second wave of study: children were school-aged (mean age not stated)	-Unvalidated measure of physical discipline during preschool and school-age assessments	Protective factors: no moderation by safe, stable, and nurturing relationships for physical discipline
Jaffee et al. (2013)	Identify contextual and interpersonal factors involved in the intergenerational transmission of maltreatment	United Kingdom Longitudinal	1,116 families in the United Kingdom with 5-year-old twins	-Childhood Trauma Questionnaire -Standardized clinical interview	Risk factors: domestic violence between mother and her partner Protective factors: high SES, maternal warmth, healthy relationship with partner
Korbin (1986)	Gain understanding of child maltreatment among mothers incarcerated for maltreating their own child, causing death	United States Qualitative	Nine women	Individual qualitative interviews	Risk factors: current victim of spousal abuse, financial stress, unhealthy or difficult infants, lack of support, unsuccessful attempts to draw attention to their distress in childhood
Linscott (2018)	Investigate factors that contribute to the risk of perpetrating maltreatment among those with a history of child maltreatment	United States Longitudinal	147 women with a history of child maltreatment	-CPS records of substantiated reports of maltreatment -Self-report of CPS contact as an adult	Risk factors: adolescent hard drug use; alcohol use in young adulthood did not predict continuity. Partner's criminal arrest history Protective factors: participant's older age at first birth; marijuana use during young adulthood predicted decreased likelihood of continuity
Pears & Capaldi (2001)	Examine parent's history of abuse and maltreatment perpetration toward their	United States Longitudinal	109 families	Parents completed the Assessing Environments-III	Risk factors: no mediation by early childbearing, parental

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	children, and the mediating roles of psychopathology, early childbearing, consistency of discipline, and severity of abuse		Mean age of youth: 10.04 years	Questionnaire; Youths completed a modified version at 21 years old.	psychopathology, or consistency of discipline
Plant Barker, Waters, Pawlby, & Pariante (2013)	To test the associations between maternal childhood maltreatment, offspring maltreatment and psychopathology, and the role of maternal antenatal depression	United Kingdom Prospective longitudinal	125 mother-child dyads Age of children: 11 years	-Unvalidated measure -11-year Child and Adolescent Psychiatric Assessment (CAPA)	Risk factors: antenatal depression
Renner, & Slack (2006)	Investigate intergenerational transmission of violence during childhood and adulthood	United States Longitudinal	1005 participants (males excluded), data from the first three waves (1999 and early 2000; 2001 and 2002) Parents and “minor-aged children” were included	-CPS reports of child maltreatment (substantiated or not; did not include cases of abuse or neglect by other individuals)	Risk factors: intimate partner violence
Schofield, Conger, & Conger (2017)	Identify protective factors related to parenting characteristics that may disrupt intergenerational cycle of harsh parenting	United States Longitudinal	290 parent-child dyads (three generations included) Mean age of second-generation child at first assessment: 25.6 years Mean age of the third-generation child at first assessment: 2.31 years	Observational measures of parent’s and offspring’s harsh parenting	Protective factors: high self-control of second-generation child, positive communication of their partner, positive relationship between their partner and their child
Thornberry & Henry (2013) ³	Assessing childhood experiences of maltreatment and maltreatment perpetration in adulthood	United States Longitudinal	816 participants adolescents followed from age 14 to approximately 31	CPS records – substantiated cases of maltreatment occurring from birth to 17, and maltreatment perpetration through average age 33	Risk factors: parents being maltreatment in adolescence vs only in childhood (timing of maltreatment); perpetration did not differ for males and females.

³ Thornberry & Henry (2013) and Thornberry et al. (2013) used the Rochester Youth Development Study
<http://mc.manuscriptcentral.com/tva>

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Thornberry et al. (2013)	To study whether a history of maltreatment increases the risk of perpetration of maltreatment, and whether safe, stable and nurturing relationships provide a protective effect	United States Longitudinal	711 participants with maltreatment data	-CPS records for substantiated cases of maltreatment perpetration between the ages of 21 to 30 -CPS records for substantiated cases of maltreatment from birth to age 18	Protective factors: positive adult intimate partners and adult-child relationship, higher satisfaction with parenthood, better attachment to child. Current attachment to and support from parent figure did not reduce risk
Tracy, Salo, & Appleton (2018)	Examine the transmission of violence across generations and to determine the effects of supportive mother and father relationships	United Kingdom Longitudinal	11,384 mothers	-Questionnaires developed by the Avon Longitudinal Study of Parents and Children (ASLPAC) team on abuse history	Protective factors: perceived social support – protective effect was reduced among offspring whose mothers experienced both maltreatment and intimate partner violence (IPV)
Wang & Xing (2014)	Investigate the transmission of corporal punishment and the moderating role of spouses' discipline in a Chinese sample	China Longitudinal	761 father-mother dyads Average age of children: 9.73 years	The Parent–Child Conflict Tactics Scale	Current use of corporal punishment by mothers did not moderate the intergenerational transmission of fathers' discipline. Current use of both mild and severe corporal punishment by fathers moderated the intergenerational transmission of mothers' corresponding discipline – mothers' childhood history of mild corporal punishment was associated with their use of mild discipline when fathers had used mild corporal punishment toward their children. Mother's childhood history of severe corporal punishment was less strongly associated with current use of this discipline when fathers had used severe corporal punishment toward their children
Williams (2015)	Examine the effects of child sexual abuse on later parenting, and whether mothers use more physical	United States Cohort design study	70 individuals with documented histories of CSA and 70 demographically matched controls	National Institute of Mental Health (NIMH) Diagnostic Interview Schedule - Revised	Risk factors: parenting problems not a significant predictor. Interaction between CSA and generalized anxiety disorder. No other significant interactions

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	abuse and/or neglect toward their own children			-CPS records limited to cases of children aged 11 or younger	between CSA and lifetime psychiatric diagnosis
Yang, Font, Ketchum, & Kim (2018)	Investigate the rate of the intergenerational transmission of child maltreatment and the mediating effect of maternal depressive symptoms	United States Longitudinal design	1200 mothers (age of children is unclear)	-Unvalidated measures on childhood experiences -CPS records for neglect and physical abuse 5 years following the baseline survey; both substantiated and unsubstantiated reports were included	Risk factors: mothers' experiences of neglect and use of physical abuse was mediated by her depressive symptoms, which also mediated experiencing and perpetrating physical abuse
Zuravin & Fontanella (1999)	Examining the effect of child sexual abuse on later parenting, and the potential mediating role of mothers' depressive symptoms	United States Retrospective survey	516 mothers	-Questions adapted from Russell (1983) -Conflict Tactics Scale: The Parenting Competence Scale prior to the respondent's 14th birthdate	No mediation effect of maternal depressive symptoms in the relation between mothers' CSA and use of severe violence or verbal abuse during conflicts.

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Table 2

Summary of documented factors and their significance

Risk/Protective Factors	# of Studies with Significant Results	# of Studies with Non-significant Results
Individual Factors	26/34	8/34
History of mental illness	3/5	2/5
Mothers' PTSD symptoms	1/1	--
Maternal anxiety	3/3	--
Maternal depression	3/4	1/4
Substance/alcohol use	5/8	3/8
Mothers' aggressive response biases	1/1	--
Maternal prenatal authoritarian attitudes	1/1	--
Authoritarian attitudes in favour of violence	1/1	--
Perceived legitimacy of own maltreatment	1/1	--
Antisocial behaviours	1/1	--
Maternal age	4/6	2/6
Mothers' participation in therapy	1/1	--
Parents' self-control	1/1	--
Parents' Childhood Adversity	7/8	1/8
Timing of mothers' sexual abuse	1/1	--
Maternal history of multiple maltreatment	1/1	--
Maternal history of neglect only		1/1
Witnessing interparental violence during childhood	1/1	--
Maltreatment during adolescence as opposed to only in childhood	1/1	--
Supportive relationship with an adult	1/1	--
Insecure childhood attachment of mothers	1/1	--
Living fewer years with own mother	1/1	--
Relational Factors	29/32	4/32
Safe, stable and nurturing relationships/ support/ isolation	3/5	2/5

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1	Relational problems with partner	1/1	--
2	Positive and supportive relationships between	6/6	--
3	parents or mothers and their partner		
4	Mothers' experiences of intimate partner	7/7	--
5	violence		
6	Good attachment to child/ maternal warmth	2/2	--
7	Inadequate parenting or parenting problems	2/3	1/3
8	Use of corporal punishment influencing the	1/1 (for influence of	1/1 (for influence of
9	other parent's use of corporal punishment	fathers on mothers)	mothers on fathers)
10	Lower perceived monitoring	1/1	--
11	Mothers' communication	1/1	--
12	Authoritarian parenting	1/1	--
13	Consistency of discipline	1/1	--
14	Satisfaction with parenthood	1/1	--
15	Parenting stress	1/1	--
16	Greater perceived approval of sex	1/1	--
17	Contextual factors	6/6	0/6
18	Children's exposure to community violence	1/1	--
19	Stressful life events	1/1	--
20	Living with a violent adult/ partner with criminal	2/2	--
21	arrest		
22	Financial stress/ SES	2/2	--

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Table 3

Results Pertaining to the Prevalence of the IT/C of Child Maltreatment

Reference	Country and Sample Size	Prevalence
Single Maltreatment Type		
Adler & Schutz (1995)	United States n= 12 males	58% of the mothers of the sibling incest offenders reported histories of sexual abuse; 25% of the mothers reported histories of physical abuse; 8% of the fathers reported similar histories
Adshead & Bluglass, 2005	United Kingdom n= 85 mothers	55% of mothers with abnormal illness behaviour by proxy had a history of childhood trauma
Bartlett & Easterbrooks (2015)	United States n= 447 adolescent mothers	60.27% of mothers of neglected infants were maltreated as children
Cannon, Bonomi, Anderson, & Rivera (2009)	United States n= 1288 mothers	49.1% of children whose mothers witnessed intimate partner violence in childhood also witnessed such violence
Chung et al. (2009)	United States n= 1265 mothers	Mothers with histories of childhood physical abuse or verbal hostility were more likely to use spanking with their infant than mothers without such histories (16% vs 11%; 17% vs 12%)
Clément & Bouchard (2003)	Canada n= 2,463 families	Proportion of children who experienced severe physical violence was twice as high when the mother reported having experienced psychological abuse during her childhood (14% vs. 6%)
Faller (1989)	United States n= 154 mothers and fathers	40% of the sexual abusers and almost half of the victims' mothers reported sexual abuse in their childhood
Gage & Sylvestre (2010)	Peru n= 12,601 mothers	Two-thirds of the mothers who had experienced physical punishment in childhood used this type of punishment with their children
Grunsfeld (2018)	United States n = 891 mothers	38.5% of children of sexually abused mothers were sexually abused
Hellmann, Stiller, Glaubitz, & Kliem (2018)	Germany n = 1,634 parents	Use of physical violence was higher in parents with histories of physical abuse in childhood: 11.3% in participants who were not abused, 30.8% in parents reporting minor physical abuse, and 38.8% in parents reporting severe physical abuse
Leifer Kilbane, & Kalick (2004)	United States n = 196 mothers	26.6% of sexually abused mothers had sexually abused children
McCloskey & Bailey (2000)	United States n = 179 mothers	54 mothers reported a history of childhood sexual abuse and 23 of them (42.6%) had daughters who were sexually abused
Oates et al. (1998)	Australia n = 62 girls, 22 boys	34% of the mothers of sexually abused children also reported a history of child sexual abuse

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Spieker et al. (1996)	United States n = 104 adolescent mothers	Mothers reported contact with CPS: 83.3% of mothers with a history of chronic sexual abuse; 38.5% for mothers with a history of brief sexual abuse; 15.4% for mothers with no history of sexual abuse
Testa, Hoffman, & Livingston (2011)	United States n = 913 adolescent females and their mothers	Among mothers with a history of CSA, 51.0% of their daughters reported victimization compared to 42.5% of daughters whose mothers did not report CSA
Wang & Xing (2014)	China n = 761 father-mother dyads	Fathers who experienced mild or severe corporal punishment were more likely to use this punishment compared to other fathers (mild corporal punishment: 57.08 % vs. 26.36; severe corporal punishment: 37.17 % vs. 9.96 %). Same pattern for mothers: mild corporal punishment: 71.95% vs. 33.62 %; severe corporal punishment: 53.39 % vs. 15.19 %
Multiple Maltreatment Types		
Bartlett et al. (2017)	United States n = 471 young, first time mothers	Based on cumulative CPS records. Children whose mothers were maltreated in childhood: 54.4% were reported to be maltreated. For substantiated reports, the intergenerational transmission rate of maltreatment by mothers was 33.5%
Berlin, Appleyard, & Dodge (2011)	United States n = 499 mothers	Of the 48 mothers who experienced childhood physical abuse, 16.7% had offspring who became victims of maltreatment by 26 months. Of the 53 mothers who experienced childhood neglect, 9.4% had offspring who became victims of maltreatment by 26 months
Boyer & Fine (1992)	United States n = 535 adolescent mothers	7% of the mothers with a history of abuse reported that their child had been abused, while it was 2% for non-abused mothers
Dixon et al. (2005a)	United Kingdom n = 135 families	6.7% families in which there was a history of abuse were referred for maltreating their own infant
Herrenkohl et al. (2013)	United States n = 357 adults	81% of the abusive discipliners reported that their mothers had been emotionally abusive to them and 75% reported their fathers had been emotionally abusive
Hunter & Kilstrom (1979)	United States N = 49 families	18.4% of infants from families with a history of maltreatment were maltreated
Jaffee et al. (2013)	United Kingdom n = 1,116 families	46% of mothers who experienced mild maltreatment had at least one twin who experienced physical maltreatment by age 12. Of the 81 mothers who experienced severe maltreatment, it was 56%
Kim (2009)	United States n = 2,977 parents	42% of the parents with a history of severe childhood victimization (neglect, physical and sexual abuse) reported physically abusing or neglecting their child; 21.1% of neglected parents used neglectful parenting toward their own child compared to 9.3% for non-neglected parents, and 9.9% reported being physically abusive (vs 5.1%); 16% of physically abused parents reported being physically abusive toward their child, compared to 3.6% for non-abused parents

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Leve et al. (2015)	United States n = 166 mothers	In a sample of mothers who had been removed from parental care in their adolescence, 42% showed a pattern of intergenerational continuity while 30-32% showed intergenerational transmission of child maltreatment
Linscott (2018)	United States n = 147 mothers	46.3% of mothers demonstrated maltreatment continuity and 53.7% did not
Pears & Capaldi (2001)	United States n = 109 families	Of the parents who were abusive toward their youth, 74% had been abused as children
Putnam-Hornstein, Cederbaum, King, Eastman, & Trickett, (2015)	United States n = 85,084 births to first-time mothers	Mothers with unsubstantiated reports of childhood maltreatment: 35.9% of their children were reported to have been maltreated between 0-5 years old. Mothers with substantiated reports of childhood maltreatment, the percentage was 44.1%
Rikic et al. (2017)	Croatia n = 118 parents	20% of parents who were psychologically abused in childhood used physical violence toward their child, while it was 31% for parents physically abused in childhood. 86-88% of parents who were psychologically abused in childhood and around 82% of those who were physically abused in childhood reported being psychologically abusive toward their child
Thornberry & Henry (2013)	United States n = 816 adolescents	Approximately 23% of participants with a history of maltreatment maltreated their own children
Thornberry et al. (2013)	United States n = 711 adolescents	14.9% of participants who were maltreated used abusive and neglectful behaviours towards their children
Tracy, Salo, & Appleton (2018)	United Kingdom n = 11,384 mothers	25.4% of offspring whose mothers experienced child maltreatment only were maltreated; 46.4% among offspring whose mothers experienced postpartum IPV only, and 62.0% among offspring whose mothers reported both
Valentino, Nuttall, Comas, Borkowski, & Akai (2012)	United States n = 70 mothers	Mothers with a history of abuse were more likely to have children who reported abuse (54.3%), compared to mothers with no history of abuse. Of the children who reported a history of abuse at age 18, 78.1% had mothers with a history of child abuse
Widom, Czaja, & Dumont (2015)	United States n = 908 children	Self-report: 21.4% of parents with documented histories of childhood abuse or neglect were reported to CPS agencies compared with 11.7% of matched comparisons. CPS records: parents with documented histories of childhood abuse or neglect were twice as likely to be reported to for maltreating their own child compared with matched comparison group (30.9% vs 15.0%)
Yang, Font, Ketchum, & Kim (2018)	United States n = 1200 participants	Among mothers who experienced neglect, 23% were investigated for neglecting their own child, 12% were investigated for using physical abuse. Among mothers who experienced physical abuse, one-fourth were investigated for neglecting their own child, 20% were investigated for using physical abuse

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Table 4

Implications for Research, Practice, and Policy

Implications for research
<ul style="list-style-type: none"> • Results provide evidence for the IT/C of child maltreatment with documentation of several psychosocial risk and protective factors • Need for more prospective longitudinal and population studies, qualitative studies to complement and explain quantitative findings, differentiation of transmission and continuity, the use of consistent definitions of maltreatment, studies involving samples from low-to-medium income countries, and moving beyond descriptive analyses to investigate IT/C using multivariate statistical analyses. • Need for more studies documenting contextual risk and protective factors. • Need for clear documentation of prevalence rates
Implications for practice
<ul style="list-style-type: none"> • Highlights the significant predictive effect of a history of child maltreatment in the continuation of maltreatment across generations • Importance of screening and identifying individuals and families with a positive history of maltreatment • Interventions may be developed and/or improved based on increased knowledge of underlying mechanisms. • Prevention efforts should target the individual, relational, and contextual risk and protective factors identified in this review, especially those that have been well documented.
Implications for policy
<ul style="list-style-type: none"> • Need to agree on consistent definitions and measurements of child maltreatment • Public funding should be attributed to prevention initiatives targeting documented risk and protective factors associated with the IT/C of child maltreatment.

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PRISMA 2009 Flow Diagram

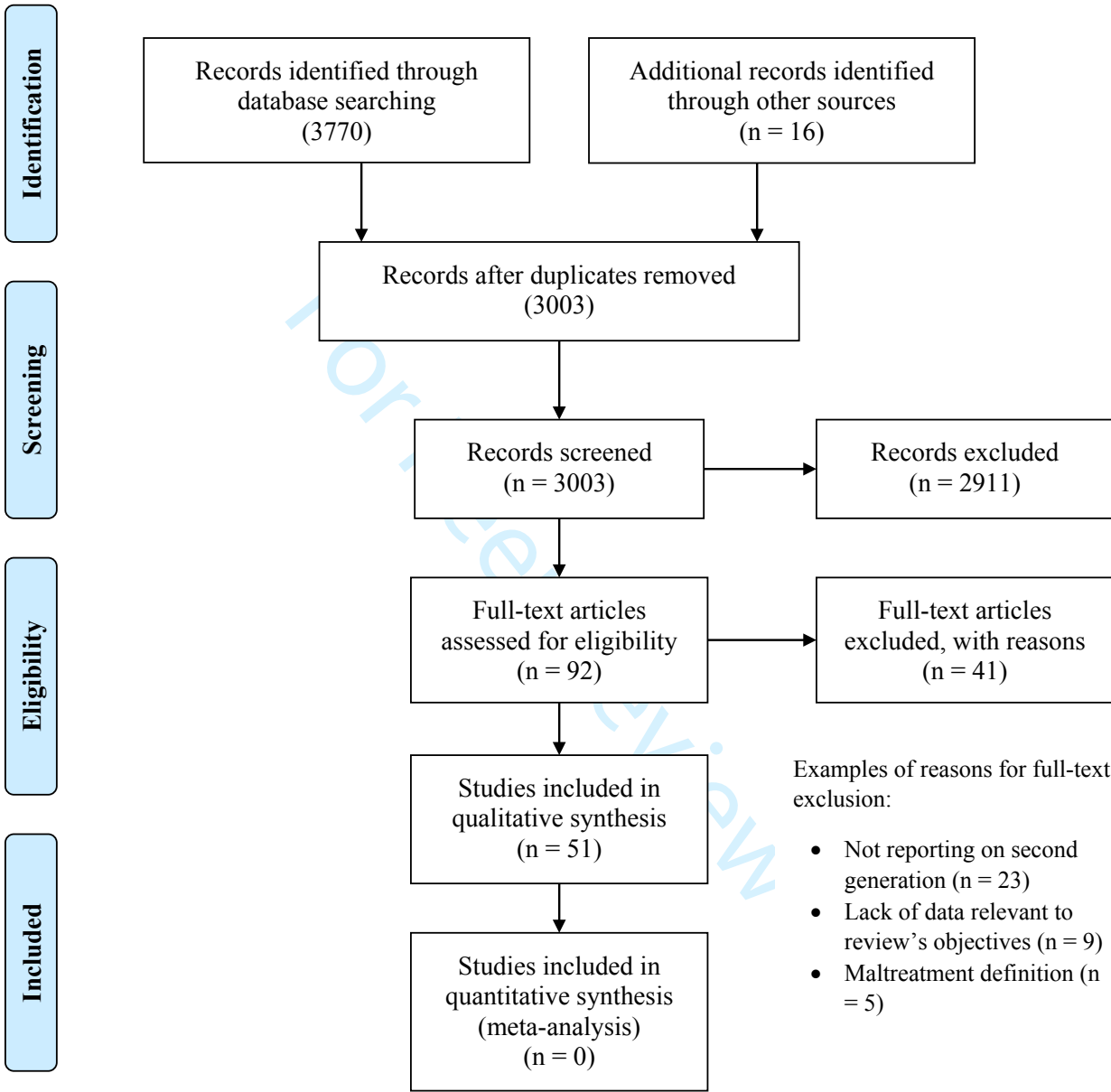


Figure 1. PRISMA Flow Diagram

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Appendix A. PsycINFO (Ovid, 1806-Present) Search Strategy

Run on November 8th, 2018

#	Search Statement	Results
1	exp Child Abuse/	27899
2	exp Child Neglect/	3837
3	exp School Attendance/	2233
4	exp Emotional Abuse/	2407
5	psychological violence.mp.	398
6	psychological maltreatment.mp.	571
7	emotional maltreatment.mp.	286
8	psychological victimization.mp.	50
9	exp Verbal Abuse/	477
10	exp Physical Abuse/	5654
11	physical assault.mp.	1072
12	physical aggression.mp.	3570
13	physical victimization.mp.	339
14	exp Domestic Violence/	10847
15	exp Exposure to Violence/	702
16	*Family Conflict/	1649
17	exp Marital Conflict/	2994
18	exp Intimate Partner Violence/	6940
19	*Partner Abuse/	3921
20	exp Battered Females/	3062
21	battered women.mp.	1866
22	battered woman.mp.	280
23	*Sexual Abuse/	16389
24	exp INCEST/	2556
25	exp RAPE/	5709
26	*Sex Offenses/	8412
27	*SEX/	2262
28	*VIOLENCE/	23258
29	27 and 28	36
30	exp VICTIMIZATION/	19855
31	27 and 30	16
32	*Child Discipline/	1393
33	exp Physical Discipline/	61
34	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 29 or 31 or 32 or 33	80587
35	*Family Relations/	26597
36	exp Home Environment/	9253
37	*Parent Child Relations/	21549
38	*Parent Child Communication/	3608

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39	exp Father Child Relations/	4531
40	exp Father Child Communication/	232
41	exp Mother Child Relations/	20983
42	exp Mother Child Communication/	2418
43	*Childrearing Practices/	7899
44	exp Parental Role/	5068
45	exp Parental Involvement/	5050
46	exp Parental Expectations/	586
47	exp Sibling Relations/	2640
48	exp Intergenerational Relations/	3775
49	exp Transgenerational Patterns/	3087
50	exp Generational Differences/	2029
51	*PARENTING/	6307
52	exp Parenting Style/	6051
53	35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52	112693
54	exp Risk Factors/	72276
55	exp Protective Factors/	4710
56	exp "Resilience (Psychological)"/	11947
57	54 or 55 or 56	85500
58	34 and 53 and 57	335